## Multimedia Appendix 3: Summary of the overarching analysis of the 17 selected integrated chronic care programs.

ICC <sup>a</sup> type	Country	Name of ICC	Macro summary of	Technologies	Information
		program	ICC program [1]	and medical	and research
				products	
Population	Austria (AU)	Health	Bottom-up network	Secure data	Descriptive
Health		Network	comprises social and	network	data analysis.
Management		Tennengau	health service	between the	
		(HNT)	providers and	hospital and	
			voluntary	approximately	
			organizations [2].	100 regional GPb.	
				Applications for	
				patients are not	
				available.	
	Germany	Gesundes	Population-based	System-wide	Triple aim
	(DE)	Kinzigtal (GK)	approach that	electronic health	external and
			organizes care across	record for health	internal
			all health service	provider and	scientific
			sectors and	digital	evaluation.
			indications [3].	benchmark	
				information.	
	Spain (ES)	Área Integral	Care co-ordination	Shared	Continuous
		de Salut,	among different	electronic health	assessment
		Barcelona	providers and care	records at	through the
		Esquerra	levels in 1 of the 4	regional level	Catalan Health
		(AISBE)	health care sectors	and Patient	Surveillance
			of the city of	Gateway. Self-	System.
			Barcelona [4].	management	Population-
				tools for patients	based risk
				and adaptive	assessment
				case	tool (the

			management	Adjusted
			tools for	Morbidity
			professionals.	Groups).
United	Salford	Originally aimed at	Use of	Continuous
Kingdom	Integrated	the elderly (>65	population risk-	monitoring of
(UK)	Care Program	years) and consists	stratification tool	process
	(SICP) and	of case management	and dashboard.	indicators and
	Salford	of high-risk patients	Partial	rigorous
	Together	with support of	introduction of	academic
		community assets	shared electronic	evaluation
		and center of	medical records.	working with
		contact for	Some disease-	the local
		prevention and co-	specific use of	university and
		ordination [5].	telehealth and	NHS <sup>c</sup> England.
			other technology	
			innovations.	
United	South	Aimed at	Some use of	Continuous
Kingdom	Somerset	multimorbidity and	population risk-	monitoring of
(UK)	Symphony	consists of GPs	stratification tool	key outcome
	Program	located in a hospital	for selecting	set. Working
	(SSSP)	hub individually	complex	with
		managing the most	patients.	Universities
		complex patients	Problems	and NHS
		and colocation of	introducing	England for
		health coaches in	shared health	robust external
		primary care to assist	records for	evaluation.
		with disease self-	professional	
		management and	access. Some	
		prevention [5].	patient use of	
			new web-based	
			record, but	

				uptake poor.	
				Some use of	
				telehealth.	
Frail Elderly	Croatia (HR)	GeroS	Integrated care	Electronic health	A monitoring
			model for geriatric	and social care	system has
			patients with	records via a	been
			multimorbidity [6].	central database.	introduced but
				Not all modules	a quality
				fully integrated	assurance
				yet.	system has not
					yet been
					established.
	Germany	Casaplus	Case management	Web-based	Continuous
	(DE)		program for elderly	platform to	external and
			(>55 years) with	support regular	internal
			multiple chronic	communication	scientific
			conditions and at	between case	evaluation.
			high risk for hospital	managers and	
			admission(s) within	nursing	
			the next 12 months	professionals.	
			[3].		
	The	Care Chain	Targets vulnerable	Secured ICT <sup>d</sup>	Extraction of
	Netherlands	Frail Elderly	older persons living	infrastructure	quality
	(NL)	(CCFE)	at home with	(Care2U) on	indicators from
			complex care needs	which individual	Care2U for
			[7].	care plans are	routine
				posted and	monitoring of
				professionals	the process
				from different	plus small-
				disciplines can	scale
				share	qualitative

			information.	evaluations by
			Different	the insurer.
			professionals	
			have different	
			levels of access	
			to data. Data	
			entered are	
			automatically	
			transferred to	
			the GPs'	
			information	
			systems, but not	
			to the	
			information	
			systems of the	
			other	
			professionals.	
Norway	Learning	Program focusing on	Electronic white	No scientific
(NO)	networks for	older persons	boards showing	evaluation
	whole, co-	enrolled in home	patient status.	conducted so
	ordinated	nursing service or		far.
	and safe	short-term stay in		
	pathways	nursing home [8].		
	(LN)			
The	Proactive	Nurse-led	Specific software	Extensively
Netherlands	Primary Care	intervention for frail	is used to screen	evaluated,
(NL)	Approach for	elderly (>60 years)	for frail elderly in	including
	Frail Elderly	living at home [7].	the electronic	randomized
	(U-PROFIT)		medical records	controlled
			of the GPs. Once	trials. Mixture
			identified the	of stand-alone

				second	data-collection
				screening-step	and data
				includes a frailty	extraction
				questionnaire	from
				and the third	electronic
				step includes a	medical
				home visit. Many	records.
				GP's use a care	
				chain	
				information	
				system that is	
				not compatible	
				with information	
				systems of other	
				organizations.	
	Spain (ES)	Badalona	Provides healthcare	Shared	Continuous
		Serveis	and social support	electronic health	assessment
		Assistencials	services with 24-7-	records at	through the
		(BSA)	365 emergency	regional level	Catalan Health
			support [4].	and Patient	Surveillance
				Gateway.	System.
				Telemonitoring	Population-
				services at pilot	based risk
				level.	assessment
					tool (the
					Adjusted
					Morbidity
					Groups).
Palliative care	Croatia (HR)	Palliative	Integrated care	County-specific	Use of
and oncology		Care System	program for	software to	questionnaires
		(PCS)		identify and	to evaluate the

			palliative care	monitor	extent to
			patients [6].	palliative	which certain
				patients. No	elements of
				common IT	palliative care
				system at	services have
				national level.	been
					established.
	Hungary	Palliative	Supports patient	Hospital	Assessment of
	(HU)	Care Consult	pathway	electronic	pain and
		Service	management across	referral system	performance
		(PCCS)	providers (eg,	to support	status and
			between secondary	consultation	professional
			care to homecare)	requests and	satisfaction
			[9].	keep record of	surveys.
				the electronic	
				documentation.	
	Hungary	OnkoNetwork	Local initiative to	IT system for	No outcome
	(HU)	(ON)	improve clinical	patient path	analysis has
			outcomes via timely	monitoring and	been
			access to quality	management.	conducted so
			assured and	Interoperability	far. Limited
			unfragmented health	with other IT	data on
			care [9].	systems is a	patient
				challenge.	experience.
Patients with	Austria (AU)	Sociomedical	Bottom-up model	Electronic data	No
problems in		Centre	providing health and	gathering and	comprehensive
multiple		Liebenau	social care	processing	evaluation has
domains of life		(SMC)	predominantly to	system.	been carried
besides their			vulnerable and	Applications for	out so far.
health			disadvantaged	patients are	
			groups [2].	viewed critically.	

The	Better	Targets persons with	Easy to use but	Preliminary
Netherlands	Together in	low self-sufficiency	stand-alone	short-term (6-
(NL)	Amsterdam	and complex needs	web-based ICT	month)
	North (BSiN)	in multiple life	support system	assessment of
		domains [7].	that is not	self-
			compatible with	sufficiency.
			the ICT systems	
			of the	
			organizations	
			involved in BSiN.	
			This system is	
			used for	
			enrollment,	
			triage and case	
			management.	
Norway	Medically	Treatment program	Electronic	Research is
(NO)	Assisted	for opioid addiction	medical record	ongoing by
	Rehabilitation	administered by the	for evaluation.	different
	(MAR) Bergen	Bergen hospital	Problematic	groups with
		enterprise [8]	sharing of	some
			medical records	outcomes for
			by specialists	the relevant
			and social	patient groups.
			services.	

<sup>a</sup>ICC: integrated chronic care.

<sup>b</sup>GP: general practitioner.

<sup>c</sup>NHS: National Health Service.

<sup>d</sup>ICT: information and communication technologies

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